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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MAKI, STEVEN D

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/712,755	Applicant(s) LANE ET AL.	
	Examiner Steven D. Maki	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-4 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the affect of "said binder slurry being applied to sized continuous fiber strands forming said continuous mat prior to said continuous filament mat being dipped in a phenolic bath" (emphasis added) on the scope of the claim is uncertain. It is unclear if (1) the quoted language is merely describing a step in the process for which the claimed composition is intended to be used or (2) the quoted language is an attempt to convert claim 1 from being a composition claim to a method claim. In claim 1, it is suggested to change "said binder slurry being applied to" (line 6) to --wherein said process includes applying said binder slurry to--. In light of the description of "A binder slurry for a continuous filament mat used in a phenolic pultrusion process" (lines 1-2, emphasis added) and "a binder slurry for continuous filament mats used in a phenolic pultrusion process" (lines 5-6, emphasis added), the proposed change would make it clear that claim 1 continues to be directed to a binder slurry per se instead of a process of using the binder slurry. In other words, the proposed change would clarify claim 1 by making it clear that the recitation of "sized continuous fiber strands forming said continuous filament prior to said continuous filament being dipped in a phenolic bath" is directed to intended use of the claimed binder slurry.

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3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4) **Claims 1-4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martino et al (US 5,120,780) in view of Vinamul technical bulletin (date 1991).**

Martino et al, directed to a glass fiber sizing composition, discloses an aqueous composition comprising polyvinylacetate film former and an organosilane such as gamma-methacryloxypropyltriethoxy silane and 3-aminopropyltriethoxy silane. The composition may also include surfactants. Acetic acid is used to adjust the pH to 5 to 6.5. Martino et al does not recite "polyvinyl acetate / silane copolymer".

As to claims 1-4 and 15, it would have been obvious to one of ordinary skill in the art to use "polyvinyl acetate / silane copolymer" as the film former in Martino et al's sizing composition for glass fibers since Vinamul technical bulletin suggests using RESYN 25-1037, which comprises vinyl acetate copolymer emulsion containing silane, as a forming size binder for glass roving since the silane group provides excellent adhesion to glass. There is no difference between RESYN® 1037 disclosed by Vinamul and the claimed "polyvinyl acetate/silane copolymer".

As to claim 1, the claimed composition reads on Martino et al's composition, which comprises polyvinylacetate film former, organosilane and water wherein "polyvinyl acetate / silane copolymer" is used as the polyvinylacetate film former. The description

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of "binder slurry for a continuous filament mat used in a phenolic pultrusion process" in the preamble of claim 1 relates to intended use and fails to require a composition different from that suggested by the applied prior art to Martino et al and Vinamul technical bulletin.

In claim 1, "said phenolic compatible silane and said polyvinyl acetate /silane copolymer forming a binder slurry for continuous filament mats used in a phenolic pultrusion process, said binder slurry being applied to sized continuous fiber strands forming said continuous filament mat prior to said continuous filament mat being dipped in a phenolic bath, wherein said binder slurry provides a compatible interface for phenolic resin systems" relates to intended use and fails to fails to require a composition different from that suggested by the applied prior art to Martino et al and Vinamul technical bulletin. Claim 1 fails to require a method comprising the step of applying the binder slurry to sized continuous fiber stands forming a continuous filament mat and dipping the mat in a bath of phenolic resin systems. Claim 1 reads on using the binder slurry as a sizing agent. In other words, the composition of claims 1-4 and 15 read on a size composition.

As to claim 2, Martino et al's aqueous composition comprises water.

As to claim 3, it would have been obvious to one of ordinary skill in the art to use acetic acid such that the pH is 4-6 as claimed since Martino et al suggests obtaining a desired pH of 2-7 (e.g. 5-6) for the aqueous composition comprising polyvinylacetate film former using acetic acid (col. 6 lines 30-35).

As to claim 4, see col. 6 lines 18-29 of Martin et al.

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As to claim 15, it would have been obvious to provide Martino et al's composition such that it contains 0.6-4% copolymer, 0.1-0.6 % silane and 0.001-0.05 % non-ionic surfactant since Martino et al teaches using 0.2-20 % of the polyacetate film former, 0-3 % adhesion promoter and surfactant; non-ionic surfactant being taken as well known / conventional type of surfactant.

5) **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martino et al (US 5,120,780) in view of Vinamul technical bulletin (date 1991) as applied above and further in view of Reichel (US 3,665,027).**

As to claim 4, it would have been obvious to one of ordinary skill in the art to use gamma-aminopropyl trimethoxy silane in Martino et al's composition since (1) Martino et al teaches using an adhesion promoter in the composition and (2) Reichel teaches gamma-aminopropylalkoxysilanes as being useful as an adhesion promoter.

Remarks

6) Applicant's arguments filed 3-31-08 have been fully considered but they are not persuasive.

Applicant's arguments regarding the 103 rejection against claims 1-4 and 15 are not persuasive because claims 1-4 and 15 are directed to a **binder slurry composition** instead of a **process or using the binder slurry**; it being emphasized that applicant's arguments are primarily directed toward the patentability of the process (the non-elected invention). Applicant's arguments are specifically addressed below:

Applicant argues that the present invention is not a size composition and is not applied to glass fibers. This argument is not commensurate in scope with the claims

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and is therefore not persuasive since (1) none of the pending claims exclude *using* the claimed binder slurry as a size composition and (2) none of the pending claims exclude *using* the claimed binder slurry in a process including applying to glass fibers.

Applicant argues that the claimed invention is a binder slurry for continuous filament mats. More properly, the description of "for continuous filament mats" relates to *intended use* of the claimed binder slurry and fails to require a composition not suggested by the applied prior art.

Applicant argues that the binder does not come in direct contact with glass fibers because of the sizing composition present on the glass fibers. This argument is not commensurate in scope with the claims and is therefore not persuasive since none of the pending claims exclude *using* the claimed binder slurry such that the binder slurry comes into direct contact with glass fibers.

Applicant argues that the binder slurry is designed to be applied to sized continuous strands forming the continuous filament mat prior to the mat being dipped in a phenolic bath. This argument is not persuasive since (1) none of the claims recite "designed" and (2) the description of "being applied to sized continuous fiber strands forming said continuous filament mat prior to said continuous filament mat being dipped in a phenolic bath" relates to intended use of the binder slurry instead of an additional limitation of the binder slurry.

Applicant argues that Vinamul does not teach a compatible adhesion of the RESYN® 1037 to a sizing composition or of forming a compatible interface with a phenolic resin. This argument is not persuasive. There is no difference between

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RESYN® 1037 disclosed by Vinamul and the claimed "polyvinyl acetate/silane copolymer". It is emphasized that "RESYN® 1037 (25-1037)" by Vinamul Polymers is the same as "Vinamul 25-1037 PVAC copolymer (Vinamul Polymers, Woodruff, S.C.)", which is described in the specification as being an example of the claimed polyvinyl acetate / silane copolymer (page 7 lines 1-6 of the specification). In other words, applicant has failed to present any convincing argument and/or evidence showing that the claimed "polyvinyl acetate / silane copolymer" does not read on "RESYN® 1037 (25-1037)" by Vinamul Polymers. More specifically, applicant has presented no convincing argument and/or evidence that "RESYN® 1037 (25-1037)" by Vinamul Polymers is different from "Vinamul 25-1037 PVAC copolymer (Vinamul Polymers, Woodruff, S.C.)".

Applicant argues that if RSYN® 1037 was *utilized* in the size composition of Martino, it would be applied directly to glass fibers, and not to sized continuous strands. This argument is not commensurate in scope with the claims and is therefore not persuasive since none of the claims require *using* the claimed binder slurry in a process comprising the step of applying the binder slurry to sized continuous strands.

Applicant argues that one skilled in the art would have been led away from *using* RESYN® 1037 in a binder slurry used in a phenolic pultrusion process. This argument is not commensurate in scope with the claims and is therefore not persuasive since none of the claims require a phenolic pultrusion *process* using a binder slurry.

Applicant argues that there is no motivation for one of skill in the art to arrive at the presently claimed invention based on the disclosures of Martino and/or Vinamul. Examiner disagrees. Vinamul motivates one of ordinary skill in the art to include

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RESYN® 25-1037, which comprises vinyl acetate copolymer emulsion containing silane in Martino et al's glass fiber sizing composition because Vinamul teaches that it is a size binder for glass fiber roving which excellent adhesion to glass.

Applicant argues that there is no motivation to arrive at the binder slurry because Martino and Vinamul are silent as to any teaching of a binder slurry for continuous filament mats or of providing a compatible interface with phenolic resins. This argument is not persuasive. Claims 1-4 and 15, which are directed to a binder slurry, fail to require a process of using the binder slurry by applying the binder slurry to a continuous filament mat. Furthermore, the property of "providing a compatible interface with phenolic resin" is a property of RESYN® 1037 (25-1037)" by Vinamul Polymers. Applicant is confusing the concept of patentability of a known composition with the concept of patentability for a new use of a known composition.

In summary, applicant's arguments regarding the 103 rejection against claims 1-4 and 15 are not persuasive because claims 1-4 and 15 are directed to a **binder slurry composition instead of a process or using the binder slurry**; it being emphasized that applicant's arguments are primarily directed toward the patentability of the process (the non-elected invention).

7) No claim is allowed.

8) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
June 22, 2008